

**(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)**

**(19) World Intellectual Property  
Organization  
International Bureau**



**(43) International Publication Date**  
**11 November 2004 (11.11.2004)**

## PCT

**(10) International Publication Number**  
**WO 2004/097886 A2**

**(51) International Patent Classification<sup>7</sup>: H01J 29/00**

**(21) International Application Number:**  
PCT/GB2004/001731

**(22) International Filing Date:** 23 April 2004 (23.04.2004)

**(25) Filing Language:** English

**(26) Publication Language:** English

(30) **Priority Data:**  
0309371.3                      25 April 2003 (25.04.2003)    GB

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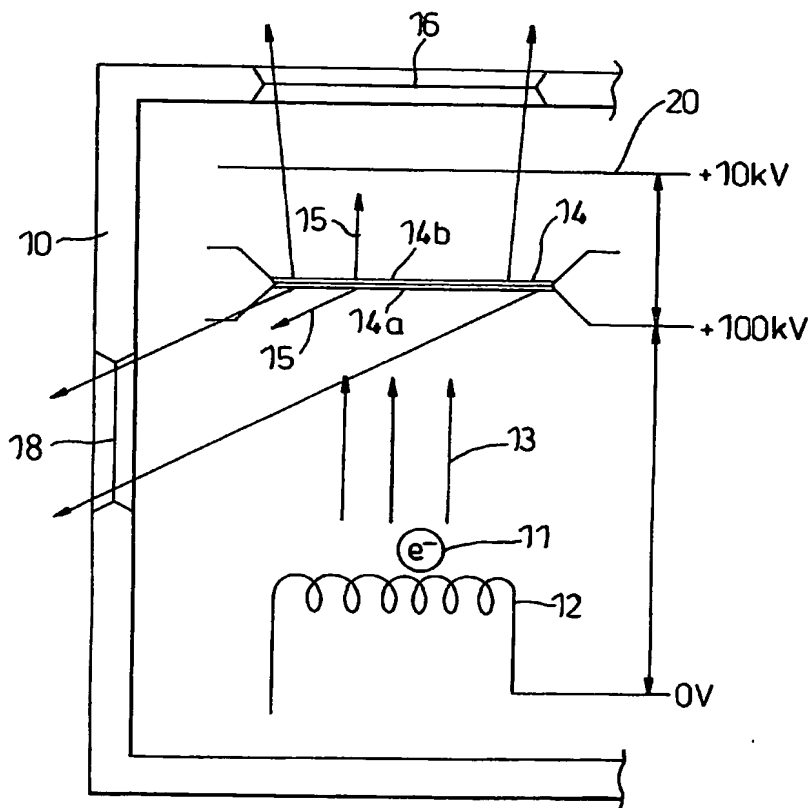
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**(81) Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

*[Continued on next page]*

(54) Title: X-RAY TUBES



(57) **Abstract:** An X-ray tube comprises an electron source in the form of a cathode (12), and an anode (14) within a housing (10). The anode (14) is a thin film anode, so that most of the electrons which do not interact with it to produce X-rays pass directly through it. X-rays can be collected through a first window (16) directly behind the anode (14), or a second window (18) to one side of the anode. A retardation electrode 20 is located behind the anode 4 and is held at a potential which is negative with respect to the anode 14, and slightly positive with respect to the cathode (12). This retardation electrode (20) produces an electric field which slows down electrons passing through the anode (14) so that, when they interact with it, they are at relatively low energies. This reduces the heat load on the tube.

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GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *without international search report and to be republished upon receipt of that report*

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